

X. *New genera and species of Languriidæ.* By the
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PLATE I.

THE following descriptions of new genera and species of *Languriidæ* are the result of a study of the species in the following collections:—1st, the collection of Mr. Crotch, kindly lent me for the purpose by the University of Cambridge; 2nd, the collection made by Mr. Lewis in Ceylon, chiefly interesting as being made up almost entirely of the *Cladoxenoid* forms; 3rd, Mr. Gorham's collection; and 4th, the British Museum collection. I have lately been arranging the collection of the group in the Brussels Museum, at the request of M. Prudhomme de Borre, and have added one or two notes on the species therein contained.

Before, however, proceeding to the descriptive part of the paper there are one or two points on which perhaps it will be well to say a few words. In the first place exception may be taken to the use of the term "*Languriidæ*": as far as I know it has only been used by myself and Mr. Lewis, who published a very valuable paper "*On Japanese Languriidæ*" in the 'Journal of the Linnean Society.' As a matter of fact the group has not yet been formally raised to the rank of a family, and is usually classed with the *Erotylidæ*. In the paper referred to Mr. Lewis alludes at length to the habits of *Languria* in the larval state, as described by Professor Comstock, and argues from these that the group is connected rather with the *Chrysomelidæ* than with either the *Erotylidæ* or the *Endomychidæ*. Mr. Lewis's own observations in Eastern Asia led him to place them near the latter of these families, but he afterwards says:—"I think we must, after reading Prof. Comstock's paper, look at the *Languriidæ* as a—comparatively speaking—recent type of Coleoptera, nearer to the *Chrysomelidæ* than to the *Erotylidæ*, which has greatly multiplied its

species, but which has as yet, owing to simple and constant habits, been evolved in the direction of growth in the longitudinal axis only." In the genus *Crotchida*, which I describe below, especially in the smaller and broader forms, there seems to be a more distinct approach to the Chrysomelidous type than has yet been noticed in the group, although the development of growth otherwise than in a longitudinal axis has been noticed by Mr. Lewis himself in the case of *L. trifoliata*, Har., which will be again alluded to.

In his paper on the *Languriæ* (Beiträge zur Kenntniss der Languria-Arten, Mittheil d. Münchener Ent. Ver., 1879), Von Harold classes all the species of the group under the single genus *Languria*; if there were very few species, or if the generic divisions were not obvious, this might be permissible, but in the first place it appears certain that when the species are all described they will amount to some hundreds at least; and in the second place, if we are to class the large *Fatua longicornis*, with its long, slender, clubless antennæ, in the same genus with, for instance, the minute *M. Jansoni*, with its short antennæ and abrupt three-jointed club, we might with quite as good reason class the great majority of the *Chrysomelidæ* and *Erotylidæ* under one genus. At the same time Crotch, whose work on the group has hitherto been generally accepted, appears to lay far too much stress on the number of joints in the club: this is often a misleading character, and sometimes very difficult to decide; in fact, Crotch himself, in his types, occasionally differs in this point from his descriptions. Owing, however, to his having made this a leading character in some of his genera, I have been obliged in one or two cases to adopt new genera, e. g., *Tetralanguroides* and *Ortholanguroides*, the insects belonging to which are closely allied to *Tetralanguria* and *Ortholanguria* respectively, but have a distinct five-jointed club to the antennæ instead of a four-jointed one, as in the two latter genera. It should, however, be added that Crotch had himself set aside the species on which I describe *Tetralanguroides* as a new genus, and that he had placed *Ortholanguroides* under *Ortholanguria*; his specimen, however, had no antennæ, but there is one specimen in Mr. Gorham's collection and two in the British Museum collection that possess them.

CROTCHIA, n. g.

Species convexæ, latiores, plus minusve gibbosæ, rarius angustiores; capite antice producto, oculis fortissime granulatis, antennis brevioribus, clava abrupte triarticulata; articulo palporum maxillarium penultimo brevissimo, secundo distincte breviori; thorace subquadrato, plus minusve transverso, marginato, angulis anticis leviter prominulis, sæpius callosis; elytris convexis apicibus singulatim rotundatis; metasterno sat longo, processu prosternali lato, truncato, utrinque marginato; pedibus modicis, tarsorum articulo penultimo fortiter bilobo, onychio longissimo ceteris articulis superante; lineæ coxales obsoletæ vel nullæ.

Rather variable in shape, but convex and usually more or less gibbous; head produced triangularly in front of the eyes, which are prominent and very coarsely granulated; in front of the eyes there is a pronounced depression reaching across front and marking the clypeal suture; labium small but usually evident, setose in front; maxillary palpi with the last joint long, penultimate very short, distinctly shorter than second; mentum trapezoidal, apparently made up of two pieces, distinctly emarginate, with a tooth in the middle of the emargination; antennæ rather short, with the club abruptly three-jointed; thorax subquadrate; more or less transverse, margined, with the anterior angles well marked, and slightly reflexed or callose at apex; elytra separately rounded at apex; tarsi with the penultimate joint strongly bilobed, onychium very long, first joints strongly pilose; metasternum usually long, prosternal process broad, truncate, and margined at sides.

This genus bears a somewhat strong relation to *Paracladoxena*, but is distinguished from it by its different shape (the thorax and elytra not being strangulate at base, as in that genus), the emarginate and denticulate mentum, and the shorter penultimate joint of the maxillary palpi. Motschulsky, in describing *Cladoxena*, refers to a genus *Cladophila*, which is not mentioned at all in the Munich catalogue; at all events this genus appears to be distinct from it, as Von Harold (*l. c.*, p. 63), says that in the genus *Cladophila* "the second joint of the antennæ is longer than the third, whereas in all *Languriæ* the third is the longest of the two"; in the genus now described the third joint is the longest as a rule, but the second and third joints are occasionally subequal in length.

Crotchchia vagabunda, n. s.

Tota ænea, nitida, elongata, sat lata, convexa, postice sensim acuminata; capite fortiter punctato, antennis rufis, clava abrupte triarticulata, oculis fortissime granulatis; prothorace subquadrato, longitudine paullo latiori, fortiter marginato, marginibus antice productis et callosis, parcius punctato, ad basin valde depresso, basi bisinuata; scutello sat magno, transverso; elytris fere glabris, ordinibus punctorum leviter seriatim instructis, convexis, ad apicem sensim depressis et acuminatis, apicibus rotundatis; pedibus piceis vel rufo-piceis. L. 7—8 mm.

Entirely æneous and shining; head rather strongly punctured; antennæ abruptly three-jointed; eyes very coarsely granulate; prothorax rather broader than long, but not very strongly transverse, rather sparingly but distinctly punctured, with strong margins, which at the anterior angles are somewhat reflexed and callose; sides not sinuate, almost straight; base bisinuate, much depressed, depression terminated on each side by a very small stria or depression; elytra convex, as broad at base as base of prothorax, widest a little behind shoulders, and gradually contracted to apex, with rows of very fine punctures; apices separately rounded; legs pitchy or pitchy-red; under surface ferruginous, glabrous, very obsoletely punctured.

Constantia; Brazil. In Mr. Crotch's collection.

Var. *punctata*. Capite thoraceque fortius punctatis, elytrorum seriebus distinctius impressis.

Rio Janeiro. In Mr. Fry's collection.

This species appears to vary considerably in sculpture, and to a certain extent in colour, being lighter or darker æneous.

Crotchchia metallica, n. s.

Præcedente latior et convexior, capite prothoraceque minus evidenter punctatis, hoc breviori, lateribus antice leviter rotundatis et ante basim sensim late sinuatis; elytris evidenter latioribus, leviter gibbosis, ad basim depressis, ordinibus punctorum obsoletissimis seriatim dispositis, pubescentia erecta parcesime instructis; antennis ferrugineis, pedibus æneis vel rufo-æneis. L. $7\frac{1}{2}$ mm.

Resembles the preceding, but is distinctly broader and more convex, with the head and thorax less distinctly punctured, and the sides of thorax distinctly though not

strongly sinuate; elytra plainly broadest just before middle.

Peru; Chancamayo. In Mr. Gorham's collection.

Crotchidia coptengoides, n. s.

Præcedenti simillima sed nigro-ænea, minor, capite prothoraceque densius punctatis, elytris confuse evidenter punctatis, pedibus ferrugineis. L. $6\frac{1}{2}$ mm.

Very like the preceding in shape and structure, but with the head and prothorax more distinctly punctured, and the latter more evidently produced in middle of base; the sculpture of the head and thorax by itself is of very little weight in species of the *Languriidæ*, but the sculpture of the elytra is usually reliable, and the elytra in this species are thickly and confusedly punctured, whereas in *C. metallica* the punctures, though fine, are arranged in evident rows with broad and smooth interstices between each pair; the colour also is darker and less æneous, and the legs are ferruginous.

Peru; Chancamayo. In Mr. Gorham's collection.

Crotchidia gibbosa, n. s.

Præcedenti similis sed multo minor, prothorace fere glabro, elytris obsoletissime et confuse punctatis. L. $4-4\frac{1}{2}$ mm.

Much smaller than the preceding species, almost black, with a very slight greenish reflection; head rather strongly and thickly punctured, prothorax almost impunctate, elytra confusedly and very indistinctly punctured. In this and the two preceding species the prothorax is very markedly transverse.

Peru; Chancamayo. In Mr. Gorham's collection.

Crotchidia nitida, n. s.

Præcedentibus similis sed major, nitidior, prothorace magis transverso, marginibus paullo fortioribus, humeris latioribus; elytris ad basim fere glabris, postice obsoletius punctatis; pedibus æneis vel ferrugineis. L. 7—8 mm.

This species belongs to the same group as the three preceding species, but the thorax is more evidently transverse and broader in proportion than the head; it comes

very close to *C. metallica*, but the margins of prothorax are stronger, the sides are more evidently sinuate towards base, and the base is much more strongly and plainly produced into a lobe in the middle; the elytra are more shining and more obsoletely punctured, especially towards base, and the colour is darker æneous.

In Mr. Crotch's collection, with the specimens labelled "Constantia," and evidently taken in the same locality; on the same card as the type is a specimen in which the sides are not sinuate towards base. It is possible that this may be the other sex of the species.

Crotchchia parallela, n. s.

Elongata, angusta, parallela, sat depressa, tota ænea; capite magno fortius punctato, prothorace subquadrato, diffuse evidenter punctato, lateribus rectis, basi bisinuata; elytris longis, parallelis, ordinibus punctorum distinctis seriatim dispositis, ad apicem sensim angustatis, apicibus rotundatis; antennis brevioribus, clava magna triarticulata; corpore subtus rufo vel rufo-piceo, pedibus brunneo-rufis, genibus infuscatis. L. 5 mm.

Narrow, elongate, and parallel; head large, rather strongly punctured; prothorax subquadrate, nearly as long as broad, with sides straight, diffusely but plainly punctured; elytra of the same breadth as prothorax, long, parallel-sided, with rows of rather strong punctures, gradually narrowed from posterior third to apex; apices rounded; legs brownish red, with the knees darker; under side ferruginous.

Amazons; Ega. In Mr. Gorham's collection.

This species, although evidently belonging to this genus, and strongly related to *C. rayabunda*, is different from any other that I have seen, and approaches more nearly to the typical longitudinal forms of *Languria*.

CLADOXENA, *Motschulsky*.

Motschulsky, Bull. Mosc., 1866, ii., 428.

As very little appears to be known about this genus, which is entirely passed over by Crotch ('Revision of the *Erotylidae*,' Cist. Ent., i., 396) with the mere mention of the references, and was evidently unknown to him, it may be of use to those who are studying the group to give a short revision of the genus, as far as can be done

provisionally in the present state of our knowledge. I am enabled to do this through the kindness of Mr. G. Lewis, who has handed over to me for the purpose his collection of *Languriidæ* from Ceylon, nearly the whole of which consists of examples of this genus.

Motschulsky's description of the genus is as follows :—“Tetramère de forme intermediaire entre *Lissomus* et *Languria*. Corselet convexe antérieurement, un peu rétréci en arrière, angles postérieurs droits; elytres allongées, rétrécies à la base et atténuées vers l'extrémité, striées par des points imprimés; écusson quadrangulaire et acuminée postérieurement; antennes surpassant en longueur la base du corselet, un peu moniliformes, à massue des trois articles. Dernier article des palpes acuminée; tarses assez larges, le troisième bilobé.”

As a matter of fact the posterior angles of the thorax are rather acute and produced, more so in the female than the male; in all probability Motschulsky formed his description from the latter sex.

Cladoxena maculata, Mots.

Motschulsky's description of this species enables it easily to be identified :—“Elongata, sublinearis, thoracis elytrorumque basi subangustatis, convexa, nitida, cupreo-ænea, elytrorum maculis utrinque in medio tribus alteraque oblonga postice pedibusque rufo-testaceis, elytris distincte punctato striatis. L. $1\frac{1}{2}$ lin.” It is, however, incomplete, and is made from a small specimen: the head and prothorax are strongly punctured, æneous or metallic-blue, the latter being either unicolorous or with more or less testaceous margins; in the female it is convex, rather strongly rounded in front and sinuate behind, with acutely projecting angles; in the male subquadrate and less convex, with posterior angles less acute; the elytra are broader at base than base of prothorax, with shoulders well marked and callose, with rather strong rows of punctures; sides gradually narrowed to apex; apices rounded and callose; æneous, with margins and often apex, two spots on each elytron, and two oblong patches near suture, yellow; these spots are somewhat variable; antennæ red, with abruptly three-jointed club, which is often darker; legs long, testaceous; tarsi, and sometimes femora partly, fuscous; under side reddish or reddish æneous. L. $3\frac{1}{2}$ —5 mm.

Ceylon. Taken commonly by Mr. Lewis.

Cladoxena pura, n. s.

Præcedenti similis, sed concolor, elytris ante basim latioribus, magis convexus.

This species closely resembles the preceding, but is concolorous æneous, with the head and thorax occasionally metallic-blue, as in the preceding species; this peculiarity is sometimes found in other æneous species, as *Henicocerus exsculptus*; the prothorax, as a rule, is a little wider and more convex, and the elytra are distinctly more convex, and widest at their anterior third: this is more obvious in some specimens than in others.

Ceylon; Dikoya (3800—4200 ft.), and Bogawantalawa (4900—5200 ft.).

I at first referred this species to *C. rufipes*, Mots., but, taking into consideration the dimensions of that insect and one or two other points of the description, I have come to the conclusion that it must be referred to the succeeding genus as a variety of *C. trifoliata*, Har. (*picipes*, Mots.?).

PARACLADOXENA, n. g.

Genus *Cladoxena* affine sed forma latiori et convexiori, thoracisque elytrorumque basi evidenter substrangulatis, humerisque minus callosis, distinguendum.

This genus comes very near the preceding, but in form and general appearance it entirely differs from it, being broader and more convex, and with punctuation much more obsolete; the base of thorax and elytra are contracted so that they appear strangulate, and the shoulders of the latter are not so callose as in the preceding genus, in which the callosity is strongly marked; the metasternum is shorter, and there is a slight difference also in the relative length of the joints of the maxillary palpi. The size of individuals of the same species is extremely variable, and is not due to sex, as in Mr. Lewis's collection there are two of the smallest specimens taken *in cop.* I can observe very little sexual difference, but the male appears to have the sides of the prothorax somewhat less sinuate.

Paracladoxena trifoliata, Har.

Cladoxena rufipes, Mots. (? var.); *C. picipes*, Mots. (verisim).

Bright bronze or brownish bronze, very variable in size; shining; head rather plainly punctured; antennæ moderately long, reddish, with club sometimes darker; prothorax broader than long, but somewhat variable in length, convex, with sides rounded in front and contracted behind; posterior angles not so produced as in the preceding species, obsoletely punctured; epipleuræ strongly punctured; elytra strongly widened in front of middle, contracted to base, and rather strongly also to apex; apices rounded, callose, often dehiscant; rows of punctures very fine; legs testaceous, often more or less clouded with fuscous; under side reddish or reddish brown. L. $2\frac{1}{2}$ —5 mm.

This is the most numerous species in Mr. Lewis's Ceylon collection. Von Harold has confirmed the species for me, and, as it is certainly his *L. trifoliata*, I have retained his name, but it may possibly have to be dropped and *picipes*, Mots., substituted, as Motschulsky's description in many points agrees with it, and the species is variable as regards colour of legs, &c. I believe Motschulsky's *rufipes* to be a rather more strongly punctured variety of this species.

Mr. Lewis, in his paper before alluded to (*l. c.*, p. 348), speaks of this species as belonging to a section the individuals of which, while usually clinging to foliage, are, when disturbed, instant in flight; the separately rounded and more or less dehiscant apices of elytra would prove this, even if the habits of the insect had not been observed, and it is possible that the callosities at the apex are connected with their habits, and aid them in rapidly opening or closing the elytra.

Paracladoxena bipustulata, n. s.

Præcedenti similis, sed prothorace latitudine longiori, elytris pro magnitudine brevioribus, utroque macula flava pone medium prope suturam instructo. L. 3—5 mm.

Resembles the preceding in general form, but is very distinct; the prothorax is very evidently longer, being distinctly longer than broad, so that the elytra appear shorter in proportion than in *P. trifoliata*; on each

elytron there is a distinct yellow spot or patch behind middle near suture, which at once distinguishes the species; as a rule the punctuation of prothorax and elytra is very fine and obsolete, but in one small specimen before me it is much stronger than in others, the prothorax being almost as strongly punctured as in *C. maculata*. Under side, legs, and antennæ as in the preceding species.

Ceylon. In Mr. Lewis's collection; five specimens from Nuwara Eliya (6234—8000 ft.), and one from Bogawantalawa (4900—5200 ft.).

MICROCLADOXENA, n. g.

If the rules of nomenclature will allow it, I propose, with Mr. Lewis's permission, to adopt this generic name for the insect named by Crotch (*L. ?*) *Jansoni* (Ent. Mo. Mag., ix., 1885), which he says "forms the type of a distinct genus, with coarsely granulated eyes, elongate antennæ, a three-jointed club, and short tarsi." This species was afterwards named *Microlanguria Jansoni* by Mr. G. Lewis; it evidently, however, by its structure, comes very near to *Cladoxena*, and Mr. Lewis tells me that it resembles *Cladoxena* in its habit of resting on the higher branches of brushwood, and in this differs from *Languria*, which lives on the herbage; the change of name therefore seems much to be desired. The species is very small ($2\frac{1}{2}$ — $3\frac{1}{2}$ mm.), entirely of a light castaneous or rufo-ferruginous colour; the much shorter tarsi, more parallel form, and more cylindrical elytra, as well as the more coarsely granulated eyes, will distinguish it from the two preceding genera, with which, however, it is clearly connected by the structure of the antennæ and tarsi. In some points it forms a transition between *Crotchia* and *Cladoxena*, in others between *Cladoxena* and *Languria*. The species is common both in Japan and in parts of Ceylon.

Besides the species above mentioned Mr. Lewis's collection contains five or six of the ordinary forms of *Languria* with red thorax and cyaneous elytra; four of these apparently belong to *L. ceylonica*, Har.; the dark legs and red coxæ are characteristic of the species: a fifth is apparently *L. fulripes*, Mots., while another appears to agree with the description of *L. nigriventris*, Mots. In

dealing with the Ceylon *Languriæ* the great difficulty lies in Motschulsky's descriptions, which are very incomplete, and in some cases will have probably to be ignored.

The following species, also from Ceylon, I discovered in the British Museum, with the MS. name, *L. decrescens*, Walker, attached; it has not, however, been described, and, as the name *decrescens* is rather a misleading one, as the elytra are not as strongly narrowed to apex as in many other species, I have adopted another.

Languria Walkeri, n. s.

Piceus, capite sat magno evidenter punctato, antennis robustis, clava distincte 4-articulata; prothorace subquadrato, lateribus antice rotundatis, postice contractis, fortius et diffusius punctatis, basi ad medium depressa et utrinque striola sat longa impressa; elytris obscurioribus, leviter punctato striatis, apicibus oblique truncatis; pedibus piceis, crassioribus, tarsis dilatatis; corpore subtus piceo. L. $10\frac{1}{2}$ mm.

Entirely pitchy, shining; head rather large, plainly punctured; antennæ rather stout, with plain four-jointed club; prothorax subquadrate, with sides rounded in front and contracted behind, rather strongly and diffusely punctured, with a well-marked depression in the middle of the base, and a plain and rather long stria on each side: elytra gradually narrowed to apex; apices obliquely truncate; legs pitchy, rather stout; tarsi much dilated; under side pitchy.

Ceylon; taken by Dr. Thwaites. A very distinct species. In the British Museum collection.

Languria oblonga, n. s.

Nigra, oblonga, sat parallela; capite sat magno, triangulari, fortiter punctato, antennis crassis, brevioribus, clava minus distincta, 4-articulata; prothorace subquadrato, latitudine longiori, lateribus antice rotundatis ad basim leviter sinuatis, evidenter marginato, diffusius et fortius punctato, ad medium late longitudinaliter impresso, basi depressa utrinque obliqua striola longissima instructa; scutello sat magno; elytris oblongis, parallelis, ad apicem vix angustatis, ordinibus punctorum fortius seriatim dispositis, apicibus truncatis; corpore subtus cum pedibus nigro, prosterno fortissime transversim rugoso. L. 16 mm.

Elongate-oblong, entirely black on both upper and under surface;

head rather large, strongly punctured; antennæ stout and comparatively short; 6th joint a little broader than 5th, 7th slightly dilated, 8—11 forming a not very distinct club; prothorax subquadrate, longer than broad, rounded in front, somewhat sinuate before posterior angles, diffusely and distinctly punctured, plainly margined, broadly impressed longitudinally in middle, the depression forming a wide channel, base depressed, with a very long stria on each side extending for about a quarter the length of thorax, and directed outwards; elytra oblong, very little narrowed to apex, with rather strong rows of punctures; apices truncate; legs black; prosternum strongly wrinkled longitudinally.

India (*Mr. J. C. Bowring*). In the British Museum collection: a very large and distinct species.

Languria refulgens, n. s.

Angusta, parallela, nitida, capite prothoraceque rufis, illo lato, triangulari, ante oculos producto, oculis prominulis; antennis sat longis, nigris, clava 5-articulata; prothorace latitudine sesqui longiori, lateribus vix rotundatis, cum capite obsoletius punctato, ad basin depresso; elytris nitidis, virescentibus, ordinibus punctorum sat magnorum seriatim dispositis, apicibus oblique truncatis, denticulatis, exterius callosis; corpore subius nigro-virescenti, fere glabro, capite infra prosternoque rufis; pedibus metallicis, coxis rufis. L. $8\frac{1}{2}$ mm.

A narrow, parallel, and shining species; head and prothorax red; elytra light metallic-green; head large and triangular, with prominent finely granulated eyes; antennæ black, with five-jointed club; prothorax plainly longer than broad, with sides very slightly rounded, rather obsoletely but evidently punctured, depressed at base; elytra with rather strong rows of punctures; apices obliquely truncate and denticulate, externally callose; legs metallic-green; coxæ red. L. $8\frac{1}{2}$ mm.

Elopura, North British Borneo; a very distinct and brightly-coloured species. In Mr. Gorham's collection.

I believe this species to be a *Langurites*, but, as there seems a little doubt on the matter, I have for the present included it provisionally under *Languria*.

COMPSOLANGURIA, n. g.

Elongata, fusiformis; capite sat magno, oculis prominulis; antennis paullo ante oculos insertis, teretioribus, articulis 7o et 8o triangulariter dilatatis, 9o et 10o latioribus, emarginatis, 11o

rotundato; prothorace lateribus fere parallelis pone medium leviter latiori; elytris apud humeros prothorace latioribus ad apicem sensim acuminatis, apicibus divaricatis, denticulatis; pedibus elongatis, tarsis longis sat dilatatis, onychio longo teretiori; lineæ coxales obsoletæ.

Elongate, fusiform; head rather large; eyes prominent and finely granulated; antennæ inserted at some little distance in front of eyes, rather long and slender, with the 7th and 8th joints triangularly dilated, and joints 9—11 wider, 11th joint rounded, almost as broad as 10th; prothorax elongate, with sides almost parallel, slightly broadest behind middle; elytra at shoulders broader than base of prothorax, gradually narrowed to apex; apices divaricate and denticulate.

This genus appears to bear some relation to *Goniolanguria*, but is at once separated by its antennæ, which point to a relation with *Doubledaya*.

Compsolanguria concinna, n. s.

Capite prothoraceque rufis, fere lævibus, elytris cyaneis ad basim late rufis, corpore subtus rufo, apice abdominis cyaneo, antennis fere nigris basi rufis, pedibus rufo-piceis, genibus obscurioribus; prothorace latitudine evidenter longiori ad basim depresso, basi striola utrinque brevi distincta impressa; elytris seriebus punctorum apicem versus obsolescentibus evidenter instructis, apicibus divaricatis, denticulatis; corpore subtus fere lævi. L. 12 mm.

Head, prothorax, and under side, except apex of abdomen, red; elytra cyaneous, broadly red towards base; antennæ as above described; last joint of maxillary palpi slightly securiform; prothorax plainly longer than broad, narrower than elytra at shoulders; elytra gradually narrowed from shoulders to apex, with distinct rows of punctures, becoming obsolete towards apex; under side almost smooth.

Amazons; in the collections of the British Museum and the Leyden Museum. One of the handsomest and most distinct of the *Languriidæ*.

Compsolanguria teres, n. s.

Præcedenti affinis sed minor et angustior, elytris totis cyaneis facile distinguendus. L. 10 mm.

This species appears closely to resemble the preceding, but it is smaller and considerably narrower, and the

elytra are entirely cyaneous; the prothorax also is more parallel-sided, and the under side is more broadly cyaneous.

New Granada; in Mr. Crotch's collection as the type of a new genus. It evidently belongs to the same genus as the preceding.

ORTHOLANGUROIDES, n. g.

Very closely related to *Ortholanguria*, Crotch (Rev. Erot. Cist. Ent., i., 395), but with the club of antennæ five-jointed and larger eyes: the species that I have seen are much smaller and narrower. Crotch's description of his genus is as follows:—"Cylindrical, parallel; head destitute of stridulating organ; antennæ with a four-jointed club; thorax elongate, base margined; elytra with the apex truncate, denticulate, sutural angle acute." Both the genera are at once distinguished by their very peculiar parallel and cylindrical shape, the elytra and thorax being of the same breadth, with sides continued almost in a straight line, and the former being parallel to apex.

Ortholanguroides cylindrica, n. s.

Cylindrica, parallela; capite nigro, magno, triangulari, oculis magnis, rotundatis, leviter granulatis, antennis brevioribus, nigris, clava longa ovali distincte 5-articulata; prothorace rufo, latitudine longiori, obsolete punctato, basi utrinque striola impressa; elytris longis, nigris vel nigro-violaceis, ordinibus punctorum seriatim fortiter dispositis, apicibus denticulatis; corpore subtus nigro, prosterno rufo; pedibus nigris. L. 9 mm.

Elongate, parallel, cylindrical; head black, with very large eyes, which are round, prominent, and finely granulated; antennæ rather short, with large oval five-jointed club; prothorax red, longer than broad, obsoletely punctured, posterior angles rather prominent, base with a stria on each side; elytra black with a violet tinge, as broad as prothorax, elongate, with strong rows of punctures, apices denticulate; legs black; under side black; prosternum red.

South America; Guiana. In Mr. Gorham's collection.

Ortholanguroides Egensis, n. s.

Præcedenti simillima sed capite rufo, prothorace fere lævi, elytrorumque seriebus minus fortiter impressis facile distinguendus. L. 9 mm.

Very like the preceding, but with the head as well as the prothorax red, and eyes not so large; the elytra are more cyaneous; the prothorax is almost impunctate, and the rows of punctures on the elytra are less strongly impressed; the under side is dark, cyaneous, but in Mr. Crotch's collection there is a specimen with the under side red; this, however, appears to be immature. The specimen is without antennæ, and is placed by Mr. Crotch under *Ortholanguria*.

Ega; Amazons. In the British Museum collection.

Ortholanguroides virescens, n. s.

Præcedenti similis sed tota læte virescens; capite thoraceque obsoletius punctatis, antennis clava 5-articulata, articulis 7o et 11o minoribus; elytris ordinibus punctorum distincte impressis, interstriis lævissime rugosis, apicibus ut in præcedentibus denticulatis. L. 9 mm.

In form and general structure very closely resembling the preceding, but of an entirely shining green metallic colour. It appears to bear the same relation to the two preceding species that *Ortholanguria concolor* bears to *O. Batesi*.

Santarem; in the British Museum collection.

GONIOLANGURIA, *Crotch*.

In his remarks on this genus (*l. c.*, p. 395), Mr. Crotch says that a closer examination of his series of *G. latipes* would probably eliminate several very closely allied species; this species, however, is so variable that I think it would be a difficult matter to separate them satisfactorily under the several names that Mr. Crotch appends to the examples in his series. The following species, however, appears quite distinct, and it is separated from all the others by Mr. Crotch.

Goniolanguria flavipes, n. s.

Elongata, angustata, tota ænea, nitida; capite prothoraceque fere lævibus, hoc latitudine multo longiori, lateribus fere parallelis, marginatis, angulis posticis acutis, productis, basi bisinuata, in medio fortiter producta, striola minutissima utrinque impressa; elytris ad basim prothorace evidentè latioribus, apicem versus sensim angustatis, ordinibus punctorum postice obsolescentibus

seriatim dispositis, apicibus divaricatis, denticulatis; antennis clava 5-articulata; corpore subtus æneo, glabro, segmento ultimo abdominalis fortiter punctato; pedibus flavis, genibus fuscis. L. $11\frac{1}{2}$ mm.

Narrow and elongate, shining æneous; head and prothorax almost smooth, the latter much longer than broad, almost parallel-sided, plainly margined, posterior angles acute, base strongly produced in middle, with a distinct impressed line above produced part, and a very small stria on each side; elytra at base broader than thorax, gradually contracted to apex; apices divaricate and denticulate; rows of punctures distinct, fainter towards apex; under side æneous, smooth; apical segment of abdomen strongly punctured; antennæ with five-jointed club; legs yellow, knees fuscous.

Brazil. In Mr. Crotch's collection.

TETRALANGUROIDES, n. g.

The genus *Tetralanguria*, formed by Crotch to include several species of Fabricius, Wiedemann, and Motschulsky from the Indo-Malayan region, is distinguished by its subquadrate thorax, which has the anterior angles always well marked and not rounded, and by its abrupt four-jointed club. Crotch enumerates six described species (*l. c.*, p. 378), and four are set aside in his collection as types of new species; as, however, he remarks himself, the species are very hard to separate satisfactorily: he says, "Probably most of those here given will ultimately prove to be varieties of one species," and, after having seen a large number of specimens, I have not been able to refer any of them to a distinctly separate species. Although the extreme forms appear at first sight widely different, yet they are connected by every gradation; the size varies from about 12 to 18 mm., and some specimens are broader, with the elytra more parallel-sided than others. The colour variations, however, are most remarkable; the commonest form in some districts appears to be metallic-blue or green, with red head and thorax (*T. elongata*, Fab.). The thorax, however, is often more or less green, the colour forming a spot in the centre, or a band, or covering the whole surface; this appears to be *T. pyramidata*, Wied. Specimens also occur which are entirely æneous or bright metallic-blue.

In Mr. Crotch's collection, however, there is a specimen set aside by him as the type of a new genus, which,

while having the shape of the prothorax as in *Tetralanguria*, is abundantly distinct by reason of its very different antennæ; as, however, it in many points resembles *Tetralanguria*, I have adopted for it the name of *Tetralanguroides*, for the same reason that I have adopted other names formed on the same principle. The genus may be thus characterised:—

Forma elongata, parallela, sat lata; prothorace subquadrato, angulis anticis distinctis, evidenter marginato, basi leviter bisinuata, elytris parallelis, apicibus truncatis; antennis crassioribus, clava 5-articulata, articulo 6o jam dilatato.

Tetralanguroides Fryi, n. s.

Capite sat magno, triangulari, leviter virescenti, fortissime punctato; antennis robustis, clava 5-articulata; prothorace rufo, obsolete punctato, macula discoidali, alteraque utrinque laterali, nigris, basi depressa, marginata, utrinque striola impressa, angulis posticis productis, acuminatis; elytris nigro-cyaneis, apicem versus leviter angustatis, apicibus truncatis, rugosis, ordinibus punctorum seriatim dispositis, interstriis latis, distincte punctatis; corpore subtus cum pedibus nigro, prosterno rufo; lineæ coxales modicæ. L. 12—12½ mm.

Head large, triangular, very strongly punctured, black, with a greenish metallic tinge; antennæ short, with the 1st joint transverse; joints 2—5 about as long as broad, 6th joint a little broader than 5th, 7—11 dilated, forming a not very distinct club; prothorax red, obsoletely punctured, with a discoidal black spot, and two others close to margins in a line with the central spot; elytra cyaneous-black, with rather strong rows of punctures, interstices plainly punctured, parallel almost to apex, then narrowed and narrowly truncate; under side and legs black; prosternum red; last segment of abdomen very strongly punctured; coxal lines distinct, but not strong.

China; in Mr. Crotch's collection. Also in the British Museum collection.

Among the species in the collection of the Royal Museum, Brussels, is a specimen of a *Pachylanguria* which I have named *Pachylanguria Borrei*; the club of the antennæ, however, is more elongate than is usual in the type-species of the genus (*P. Paiva*, Woll., and *P. metasternalis*, Crotch) and differently shaped, and the species differs also in one or two other points, and may

form the type of a distinct genus. As, however, *P. collaris*, Crotch, is closely connected with it, it seems the best course to leave these two species, for the present at all events, under *Pachylanguria*. Among other new species in the Brussels Museum collection there is a small *Callilanguria*, distinguished by its yellowish abdomen; a species of *Languria* near *L. formosa*, Crotch; and a species with dark elytra and red thorax, which is remarkable for its very long and slender legs. Descriptions of these species have been lately published in the 'Comptes Rendus de la Société Ent. de Belgique' (May 1st, 1886).

With the Ceylon species Mr. Lewis handed to me a few other specimens of the group. Among these is a small *Languria* with red head and thorax, cyaneous elytra, and five-jointed club, which is very interesting as having occurred in Egypt; a species has occurred in Siberia, but no species has hitherto been recorded so near to Europe as the one now referred to. It appeared most probable that the Egyptian species would prove a new one, but, on examining the under side, I at once saw that it was *L. melanosterna*, which was described by Von Harold in his paper above referred to from Luzon, Philippine Islands, and of which I have a number of specimens before me in the Brussels collection from the same locality. The species is easily distinguished by having the under side of the head, the prosternum, and abdomen clear testaceous or red, while the meso- and metasternum are black, and by the first joint of the posterior tarsi being as long as the two following together; the occurrence of this insect in such widely-separated localities is very interesting, but is somewhat paralleled by the distribution of *M. Jansoni* above referred to.

The following species remains to be described from Mr. Crotch's collection.

Languria affinis, n. s.

Nitida, capite prothoraceque nigris, illo sat magno obsoletius punctato, hoc convexo lateribus modice rotundatis, ante basim subsinuatis, fortiter marginato, evidenter pareius punctato, basi depressa, striola brevi utrinque impressa; elytris late cyaneis vel violaceis, humeris elevatis, ad apicem sensim contractis, apicibus truncatis; corpore subtus cum pedibus nigro vel nigro-cyaneo;

antennis nigris, clava haud distincta 5-articulata; lineæ coxales elongatæ, fortissimæ. L. 8 mm.

Head and prothorax black, the former obsoletely punctured, the latter convex, with sides moderately rounded and slightly sinuate before base, plainly but diffusely punctured; margins strong, somewhat reflexed, base depressed, and with a short stria on each side; elytra cyaneous or slightly violaceous, with shoulders well marked, gradually narrowed to apex; apices truncate; rows of punctures moderately strong; under side and legs black or dark cyaneous; antennæ with rather indistinct five-jointed club; coxal lines very strong; male with prothorax rather wider in front than female.

From *L. Giloloæ*, Crotch, *L. rufipes*, Crotch, and *L. atrocyanea*, Har., this species appears to be well distinguished by its punctured prothorax and five-jointed club of antennæ. It seems, however, most probable that the three species here mentioned are all varieties of one species which is variable in size. Crotch (*l. c.*, p. 386) speaks of *L. rufipes* as very near to, and probably a variety of, *L. Giloloæ*, and Von Harold seems somewhat doubtful regarding *L. atrocyanea*. *L. nigrocyanea*, Crotch, belongs to the same group, and differs very slightly from the species belonging to it.

L. Lewisii, Crotch, appears to be another variable species as regards size, colour of legs, &c. I believe that *L. geniculata*, Har., and very probably *L. naræ*, Lewis, are merely varieties of this species, and that some of the allied unicolorous æneous species stand in need of further revision.

In studying the *Languriæ* it is impossible to help being struck by the fact that certain of the groups of species are extremely variable in points that in more highly organised Coleoptera are always constant, so much so that it is in many cases almost impossible to draw the line between species and species; this is more particularly the case with regard to sculpture. The sexual differences, which in some genera (e. g., *Double-daya*) are very remarkable, also give rise to considerable confusion, and in describing new species must be carefully taken into account.

Mr. Lewis, as quoted at the beginning of this paper, regards the *Languriidæ* as a, comparatively speaking,

recent type of Coleoptera. I am inclined to think that this cannot be regarded as in any way settled, and that the simplest forms are often the most archaic; the question appears to be one of environment entirely, and if the environment is constant, and no special circumstances arise to call for any special alteration, no alteration takes place. In the predaceous Coleoptera there must always be a great development going on from the very nature of their habits both in the larval and the perfect state, which tend to bring about the survival of those individuals that possess certain organs in their fullest development. In phytophagous Coleoptera, however, like the *Languriidæ*, which as a rule live on low herbage, and appear to undergo their metamorphoses inside the stems of plants (as observed by Professor Comstock, quoted by Mr. Lewis), there seems every reason why they should continue without change for a very long period. It is of course possible, as Mr. Lewis (*l. c.*, p. 351) seems inclined to think, that they have developed the elongate from the rotundate form, and then retained it. I am inclined, however, to believe that the elongate form is the prior form, and that the least divergency from their usual habits of keeping to low herbage is at once attended by an alteration of form, as is shown by the *Crotch*ia and *Cladoxena* groups, which are found resting on the higher branches of shrubs and brushwood. The question, however, is a very difficult one, and can only be touched upon in passing in a descriptive paper.

EXPLANATION OF PLATE III.*

- FIG. 1 and 1a. *Compsolanguria concinna*, n. s.
 2 „ 2a. *Crotch*ia *nitida*, n. s.
 3 „ 3a. *Ortholanguroides Egensis*, n. s.
 4 „ 4a. *Crotch*ia *vagabunda*, n. s.
 5 „ 5a. *Cladoxena pura*, n. s.
 6 „ 6a. „ *maculata*, Mots.
 7. „ *Tetralanguroides Fryi*, n. s.
 8. „ *Tetralanguria splendens*, Wied.
 9 „ 9a. *Microcladoxena Jansoni*, Crotch.
 10 „ 10a. *Paracladoxena trifoliata*, Har.
 11 „ 11a. „ *bipustulata*, n. s.

* Not Plate I., as printed in error at p. 303.